CLAIMS

What is claimed is:

5 1. A method for the preparation of a compound or a pharmaceutically acceptable salt thereof, the compound having a structure corresponding to Formula **21**:

$$\mathbb{R}^{13} \xrightarrow{\mathbb{N}} \mathbb{R}^{10} \xrightarrow{\mathbb{R}^1} \mathbb{R}^{10} \xrightarrow{\mathbb{R}^6} \mathbb{R}^2 \xrightarrow{\mathbb{N}} \mathbb{N}$$

$$\mathbb{R}^{11} \xrightarrow{\mathbb{R}^{10}} \mathbb{R}^{10} \xrightarrow{\mathbb{R}^7} \mathbb$$

or a salt thereof,

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wherein:

X is selected from the group consisting of -S-, -S(O)-, and -S(O)₂-;

 R^2 is selected from the group consisting of C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl, C_1 - C_5 alkoxy- C_1 alkyl, and C_1 - C_5 alkylthio- C_1 alkyl;

 R^{30} is selected from the group consisting of -H, -OH, -C(O)- R^{17} , -C(O)-O- R^{18} , and -C(O)-S- R^{19} ;

 R^{1} , R^{5} , R^{6} , and R^{7} independently are selected from the group consisting of -H, halogen, C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl, and C_1 - C_5 alkoxy- C_1 alkyl;

 R^9 and R^{10} independently are selected from the group consisting of -H, C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl, and C_1 - C_5 alkoxy- C_1 alkyl;

with respect to R¹¹ and R¹²:

 R^{11} is selected from the group consisting of -H, -OH, -C(O)-O- R^{24} , and -C(O)-S- R^{25} ; and R^{12} is selected from the group consisting of -H, -OH, -C(O)-O- R^{26} , and -C(O)-S- R^{27} ; or

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R¹¹ is -O-, and R¹² is -C(O)-, wherein R¹¹ and R¹² together with the atoms to which they are attached form a ring; or

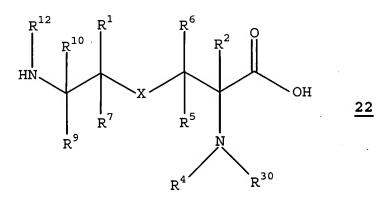
 R^{11} is -C(O)-, and R^{12} is -O-, wherein R^{11} and R^{12} together with the atoms to which they are attached form a ring; and

R¹³ is C₁ alkyl;

R¹⁷, R¹⁸, R¹⁹, R²⁴, R²⁵, R²⁶, R²⁷, and R^{27a} independently are selected from the group consisting of -H and alkyl, which is optionally substituted by one or more moieties selected from the group consisting of cycloalkyl, heterocyclyl, aryl, and heteroaryl; and

when any of R¹, R², R⁴, R⁵, R⁶, R⁷, R⁹, R¹⁰, R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²⁴, R²⁵ R²⁶, R²⁷, and R^{27a} independently is a moiety selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxy, alkylthio, cycloalkyl, heterocyclyl, aryl, and heteroaryl, then the moiety is optionally substituted by one or more substituent selected from the group consisting of -OH, alkoxy, and halogen;

wherein the method comprises treating a diamine compound having a structure corresponding to Formula <u>22</u>:



or a pharmaceutically acceptable salt thereof, with an alkyl acetimidate having a structure corresponding to Formula <u>23</u>:

$$R^{11}$$
 N
 R^{13}
 OR^{31}

or a salt thereof, wherein R^{31} is C_1 - C_6 alkyl,

to produce the compound corresponding to Formula 21.

- 2. The method of Claim 1 wherein R¹¹ is selected from the group consisting of -H and -OH.
 - 3. The method of claim 2 wherein R¹¹ is -H.
 - 4. The method of Claim 2 wherein R¹¹ is -OH.

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- 5. The method of Claim 2 wherein R¹³ is methyl or halomethyl.
- 6. The method of Claim 5 wherein R^{13} is methyl.
- 15 7. The method of Claim 2 wherein R^{31} is C_1 - C_3 alkyl.
 - 8. The method of Claim 7 wherein R^{31} is ethyl.
- 9. The method of Claim 1 wherein the treating of the diamine compound with the alkyl acetimidate compound is performed in the presence of a base.
 - 10. The method of Claim 9 wherein the base is selected from the group consisting of a hydrazine, a metal sulfide, a metal hydroxide, a metal alkoxide, an amine, a hydroxylamine, a metal amide complex, and a basic resin.

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- 11. The method of Claim 10 wherein the base is a basic resin.
- 12. The method of Claim 11 wherein the basic resin is a polymer-bound diazabicyclo[4.4.0]dec-2-ene.

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13. The method of Claim 10 wherein the base is an amine.

14. The method of Claim 13 wherein the base is selected from the group consisting of 1,5-diazabicyclo[4.3.0]non-5-ene; 1,4-diazabicyclo[2.2.2]octane; and 1,8-diazabicyclo[5.4.0]undec-7-ene.

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